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| 10/534,237 | 05/06/2005 | Juan Manuel Tejjido | 282780US8X PCT | 3378 |
| 22850 | 7590 | 11/29/2007 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER MARTINEZ, JOSEPH P | |
| | | | ART UNIT 2873 | PAPER NUMBER |
| | | | NOTIFICATION DATE 11/29/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/534,237

Applicant(s)

TEIJIDO ET AL.

Examiner

Joseph Martinez

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 2-19 and 21-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,20 and 40-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5-6-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 2-19 and 21-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9-4-07.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 40, 42 and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 40, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 40 recites the limitation "said light mixing device" on p. 12, ln. 5. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, the examiner interprets claim 40 on p. 12, ln. 5 to read, "a light mixing device". Appropriate correction is required.

Claim 42 recites the limitation "said light mixing devices" on p. 13, ln. 3. There is insufficient antecedent basis for this limitation in the claim. For purposes of

examination, the examiner interprets claim 42 on p. 13, ln. 3 to read, "light mixing devices". Appropriate correction is required.

Regarding claim 44, line 6, the points of ellipses ("...") and "interpolates between these refraction indices" render the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Furthermore, it is unclear as to what "interpolates." For purposes of examination, the examiner interprets claim 44, ln. 6 to read, "periphery." Appropriate correction is required.

Drawings

Figure 21 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 20 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Tiao et al. (6318863).

Re claims 1, Tiao et al. teaches for example in fig. 2A, an illumination arrangement, in particular for a projection system, comprising: a light source device (200) being adapted for generating and for emitting primary illumination light (col. 3, ln. 7) and - a light collecting, integrating and redirecting device (210, 220) being adapted for receiving at least a part of said primary illumination light from said light source device (col. 3, ln. 14-18) and for redirecting said received primary illumination light so as to obtain redirected primary illumination light and for outputting said redirected primary illumination light or a derivative thereof as secondary illumination light (col. 3, ln. 14-18), wherein said light source device at least comprises at least one solid state light source device (202; col. 3, ln. 25-31), - wherein said light collecting, integrating and redirecting device comprises one light valve device (230) being adapted for receiving said redirected primary illumination light and for outputting said secondary illumination light in a controllable manner (col. 2, ln. 19-21), and wherein said light collecting, integrating and redirecting device comprises at least one light integrating device (210, 220) being adapted for directly receiving and for integrating at least a part of said primary illumination light generated by and emitted from at least one associated of said

at least one solid state light source device (200) and for outputting said redirected primary illumination light or a derivative thereof (col. 3, ln. 14-24).

Re claim 20, Tiao et al. further teaches for example in fig. 2A, wherein a light coupling and/or guiding improving arrangement (arrangement of fig. 2A) is provided which is adapted and/or arranged so as to improve coupling and/or guiding of said primary illumination light (col. 3, ln. 14-18) from said light source device (200) to and/or within said light collecting, integrating and re-directing device (210, 220) and in particular to and/or within said light integrating device (210, 220).

2. Claims 40-45 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Li (6587269).

Re claim 40, Li teaches for example in fig. 1 and 5, an illumination arrangement, in particular for a projection system, comprising: a light source device (120) being adapted for generating and for emitting primary illumination light and a light collecting, integrating and re-directing device (10) being adapted for receiving at least a part of said primary illumination light from said light source device (fig. 5) and for re-directing said received primary illumination light, so as to obtain re-directed primary illumination light (redirected S-light, fig. 1) and for outputting said re-directed primary illumination light (redirected S-light, fig. 1) or a derivative thereof as secondary illumination light (output, fig. 1; col. 3, ln. 6-18), wherein said light collecting, integrating and re-directing

device comprise at least one light integrating device (20, 50) being adapted for directly receiving and for integrating at least a part of said primary illumination light generated by and emitted from at least a part of said light source device and for outputting said re-directed primary illumination light or a derivative thereof (fig. 1 and 5; col. 3, ln. 6-18), wherein a light coupling and/or guiding improving arrangement (arrangement in fig. 1 and 5) is provided which is adapted and/or arranged so as to improve coupling and/or guiding of said primary illumination light (col. 4, ln. 14-22) from a light mixing device (20, 30, 50) to and/or within said light collecting, integrating and re-directing device (20, 50) and in particular to and/or within said light integrating device (20, 50).

Re claim 41, Li further teaches for example in fig. 1 and 5, wherein said light integrating device (20, 50) is or comprises a plain light pipe - in particular a solid integration rod (col. 4, ln. 25), having a light incidence aperture (input of 20 and 50) and a side wall (side walls of 20 and 50), wherein said side wall of said light integrated device is provided with a reflecting means (60) as said light coupling and/or guiding improving arrangement (arrangement in fig. 1 and 5) or as a part thereof at its outer periphery at least in a neighborhood of said light incidence aperture (col. 4, ln. 14-22), and wherein said reflecting means (60) is adapted and/or arrangement so as to reflect light escaping from said light integrating device (20) through the side wall thereof back into said light integrating device (50; fig. 1).

Re claim 42, Li further teaches for example in fig. 1 and 5, wherein said light integrating device (20, 50) is or comprises a plain light pipe - in particular a solid integration rod (col. 4, ln. 25), having a light incidence aperture (input of 20 and 50), wherein said light incidence aperture of said light integrating device (input of 20 and 50) is positioned in a neighborhood of a light exit aperture (fig. 5) of said light source device (120) or of said light mixing devices (30) and wherein between said light incidence aperture (501) of said light integrating device (50) and said light exit aperture of said light source device or of said light mixing devices (30) refraction index matching means (col. 5, ln. 39-45) is or are provided, in particular filling a gap or a gap structure (70) between said light incidence aperture (input of 20 and 50) of said light integrating device (20, 50) and said light exit aperture of said light source device (120) or of said light mixing devices (30).

Re claim 43, Li further teaches for example in fig. 1 and 5, wherein said refraction index matching means is a liquid, gel, and/or a glue (col. 5, ln. 42-44).

Re claim 44, Li further teaches for example in fig. 1 and 5, wherein said refraction index matching means has a refraction index which essentially coincides with the refraction index of the material of said light integration device or with the refraction index of the material of the light source devices periphery (col. 5, ln. 42-44; wherein the examiner interprets the refractive index of the "low index epoxy or other transparent material such that the total internal reflection still occurs" to teach a refraction index

which essentially coincides with the refraction index of the material of said integration device).

Re claim 45, Li further teaches for example in fig. 1 and 5, wherein said light integration device (20, 50) is or comprises a hollow light pipe (col. 4, ln. 25) having a light incidence aperture (input of 20 and 50), wherein said light incidence aperture of said light integrating device (20, 50) is positioned in a neighborhood of a light exit aperture (fig. 5) of said light source device (120) or of said light mixing devices (30) and wherein a second or end section in the neighborhood of said light incidence aperture (input of 20 and 50) and/or being terminated by said light incidence aperture (input of 20 and 50) is - in particular completely - filled with a plain light pipe section (20 or 50), in particular for matching the respective refraction indices (col. 4, ln. 30-33; wherein the examiner interprets 20 and 50 could be made from the same material).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Joseph Martinez/
Patent Examiner, AU 2873
11-23-07